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REVIEWS OF BOOKS

The Science of Human Behaviour, Biological and Psychological Foundations. By MAURICE PARMELEE. New York, The Macmillan Co., 1913.—pp. xvii + 443.

The avowed purpose of this book is to bring together 'the results of recent work in biology in general and in zoology and neurology in particular, and in anthropology, and to show the significance of this work for the analysis of human behavior.'

The early chapters, the first half of the book, in fact, deal with purely biological matters, the nature of living matter, the cell, the theories of heredity and evolution as they have been formulated by Lamarck, Darwin, Mendel, De Vries, and Galton. Next a series of chapters is devoted to the behavior of unicellular organisms as discussed by Verworn, Loeb, and Jennings. The various tropisms are described and an account is given of the more important theories of the activities of these low forms. The author expresses little sympathy for the conclusion of Jennings that even in these lowest organisms one may find many of the characteristics of the behavior of higher organisms.

Three chapters are devoted to a description of the nervous system and its development. The work of Sherrington, Herrick, and Johnston is summarized with some completeness. Numerous long quotations insure an accurate statement of the views of these men. It might be questioned whether the various views are sufficiently fully introduced and knit together and freed from technical terms to make them comprehensible to the uninitiated for whom alone the book has value, —a question that can only be answered through trial. If it prove available in these respects it will be very convenient to have the material in one volume.

What is perhaps the characteristic personal contribution of the author in the volume as a whole first makes its appearance in the chapters on instinct. This is a questioning of the conclusions of much of the current discussion of instinct. After collating most of the more modern definitions of instinct he eliminates one by one many activities that are somewhat loosely brought together under the term. He has the usual difficulty in distinguishing between reflex on the one hand and the results of intelligent action as crystallized in habit on the other. What he objects to most is the usual custom of using the term instinct to designate the ends that are accomplished, as in the parental instinct or sympathy, and lumping a large number of indefinite acts together under the one head. After weighing the advantages and disadvantages of the several theories he himself concludes: "An instinct is an inherited combination of reflexes which have been integrated by the central nervous system so as to cause an external activity of the organism which usually characterizes a whole species and is usually adaptive." Testing by this criterion the author must greatly reduce the list of human instincts as given by current writers. He does not supply a list of his own, and if taken sufficiently seriously the definition given would probably practically eliminate instincts from the list of factors of behaviorism. Reflex on the one side and intelligent action on the other might easily expand to fill the gap. Fear, sympathy, emulation, workmanship, gregariousness are among the instincts that Parmelee would reject or would anlayze into a group of instincts or reflexes. This portion of the book is always suggestive and interesting although not always consistent.

Probably the least satisfactory chapters of the book are the three devoted to the psychological problems entitled respectively, "The Nature of Intelligence," "Consciousness" and "Personality, Intelligence, Consciousness and the Nature of Kind." Part of the difficulty is due to too great condensation but more to the fact that the author does not seem fully to have mastered and kept separate the different attitudes and ways of approach that now rule in psychological circles. He frequently brings together in a single discussion statements that are true only if one recognizes that they have been developed from different presuppositions which are in themselves incompatible. The two opposing ways of approach, the objective and the subjective, are those that most often give rise to unclearness. He does not consistently stick to one or the other nor make clear that the two methods are each tenable but cannot be harmonized at present; nor make clear that certain of his conclusions are true if the one set of premises holds, others if the other set is posited. The consequence is an almost all pervasive confusion. This mixing of standpoints comes out clearly in his discussion of the criteria of intelligence. Jennings's functional, but objective, criterion of modifiability of behavior is rejected because it would carry intelligence too low in the animal series. Loeb's associative memory,—strictly taken, a subjective criterion,—obtains more favor, but is made to rest upon the purely structural test of the presence of association centers, and again the ants are said to have association centers, probably from purely functional considerations.

Then the whole matter is further complicated by making intelligence depend upon the presence of ideas. Intelligence implies learning, and then the author says: "I shall limit learning to modifications in the behavior of an animal capable of forming images when such modifications are due to the ability to form images." This last criterion of learning is in principle inapplicable below man, and in the form stated would not truly describe most human learning, which is apparently very little dependent on the presence of ideas. Professor Parmelee admits that it may never be possible to apply his criteria of intelligence to any animal in practice. Similar objection might be made to his insistence in one place that emotion is merely the subjective side of instinct and in another to the assertion that it is nothing but sensation, and then in one of the last chapters making emotion an active force in producing social organization, alongside of and in addition to instinct. The entire discussion in this part of the book, it seems to the reviewer, is a curious mixture of over subtlety and great dogmatism in drawing distinctions of his own coupled with complete failure to appreciate distinctions which have long been found of great value to the psychologist.

In the last four chapters are discussed the forces that make for social evolution. A long summary based on Wheeler and Wasmann is given of the social phenomena as they appear among the ants with casual references to the other social insects. The conclusion is reached that insect societies depend mainly upon instincts. More briefly are discussed the facts of association among the vertebrates, from the fishes to man. The forces that contribute to the formation of societies are classed under three groups, external or environmental, such as the restricted areas of food suitable to a species, the distribution of temperature, etc., and two internal forces, primarily instinct and intelligence. Each is of value only in so far as it shows utility for survival. The whole attitude may be shown in this summary, p. 393. "Man is very social, because he is weak as compared with many species which prey upon him, because his young are born very helpless and remain so for a long time, and because he has a highly developed nervous system which furnishes the basis for a high degree of intelligence, thus making possible a high degree of mental interaction from which result a good deal of pleasure and a great deal of cooperation and mutual aid in the form of a social division of labor which facilitates greatly the securing of food and the other necessities of life."

Of the instincts, the sexual and parental alone receive emphasis. These are not available in the development of the wider associations, since the author admits with Espinas that the family is in many ways inimical to the formation of wider association. The only advantage is that it develops certain talents that may make easier the development of wider associations. The emotions are said in one place (p. 406) to be forces that increase the effect of the instincts, sexual and parental, and so contribute to the formation of the family. Later (p. 418), in criticism of Sutherland, the emotions are identified with instinct, in harmony with the earlier definition. Among intelligent forces are mentioned invitation, the recognition of kind, communication, made possible by the development of vocal organs and the nervous system, and leadership. The theories that have laid emphasis upon these different forces are briefly reviewed with the conclusion that "all of the writers—McDougall, Petrucci, Adam Smith, Sutherland, Giddings, Kropotkin, Tarde, and Durkheim—have made important contributions to the analysis of social evolution, but it is evident that all of their theories are too unilateral and do not include all of the factors in social evolution."

On the whole the volume provides a useful résumé of a wide range of the literature in English, in general biology, nervous anatomy and physiology, and psychology, that bears upon human behavior. It is of course impossible for any one to be equally familiar with all parts of so wide a field, there must be occasional slips and there would necessarily be difference of opinion as to the emphasis that should be put upon different parts of the field; but in spite of its faults the work should be a convenient work of reference for the student who has not the time or opportunity to read the summaries of fact in the different realms of knowledge from which Professor Parmelee draws his material.

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Prinzipien der Erkenntnislehre. Versuch zu einer Neubegründung des Nominalismus. Von E. v. ASTER. Leipzig, Quelle & Meyer, 1913. —pp. 408. Geh. M. 7.80; Geb. M. 8.60.

The subtitle proclaims this work to be an attempt to ground anew the doctrine of nominalism. The proposal bids us pause, for who is unmindful of the three centuries of 'monkish quarrel' when wrangling schoolmen drew out in fine-spun distinctions every theological impliction of this doctrine, made logic confront itself, asked of psychology impossible questions, framed definitions in general terms where the meaning of general terms was itself the matter in dispute, and drove the whole controversy afield into boundless regions of metaphysical speculation? It is true nevertheless that nominalism